

### REMARKS

In the Office Action mailed October 3, 2002, the Examiner rejected Claims 1-6 under 35 U.S.C. § 102(b) as being anticipated by Kuribayashi et al. ("Battery Characteristics with Various Carbonaceous Materials," *Journal of Power sources* 54 (1995) 1-5), as supported by *Hawley's Condensed Chemical Dictionary*. To the extent that the rejection applies to the amended claims, Applicants respectfully traverse the rejection.

Applicants respectfully submit that the amorphous graphitizable carbon shell as recited in amended Claim 1 is produced by a process that includes dissolving amorphous carbon in an organic solvent to produce a solution, and mixing crystalline graphite particles with the solution. (As taught in the originally filed specification at page 4, lines 6-14). Applicants respectfully submit that Kuribayashi does not teach or suggest the desirability of forming a carbonaceous active material in this manner.

Applicants respectfully submit that Kuribayashi teaches against dissolving amorphous carbon in an organic solvent, and that Kuribayashi teaches mixing powders to form the active material, "to obtain a carbonaceous material with a higher energy density than coke by coating a blend of phenol resin and fine-ground graphite on green mesophase-pitch beads" (Kuribayashi, page 1, col. 2, lines 21-24), "Powder consisting of green mesophase-pitch beads was mixed with phenol resin and various amounts of finely ground graphite powder in the kneader, polymerized, and then heat treated at various temperatures in a nitrogen atmosphere." (Kuribayashi, page 2, col. 1, lines 13-17.)

In the rejection Claims 1-6, the Examiner stated that, "thus, the graphite and carbon core materials will inherently have two specific peaks by DTA." Applicants respectfully submit the Kuribayashi does not teach or suggest the desirability of two exothermic peaks as recited in Applicants' Claim 1. Applicants respectfully submit that the Examiner is making the rejection based on facts within the personal knowledge of the Examiner. Applicants respectfully request that the Examiner file an Affidavit pursuant to 37 C.F.R. § 1.104(d)(2) supporting the Examiner's assertion.

Applicants respectfully submit that Claims 2-6 are dependent upon allowable Claim 1 and are allowable for at least the same reasons.

Applicants respectfully request that the Examiner withdraw the rejection to Claims 1-6 under 35 U.S.C. § 102(b) as being anticipated by Kuribayashi.

In the Office Action, the Examiner rejected Claims 1-6 under 35 U.S.C. § 102(e) as being anticipated by Liu et al. (U.S. Patent No. 5,908,715) ("Liu"). To the extent that the rejection applies to the amended claims, Applicants respectfully traverse the rejection.

Applicants respectfully submit that amended Claim 1 recites the limitation of an amorphous graphitizable carbon shell coating the outside of the crystalline graphite core. Applicants respectfully submit that Liu does not teach or suggest the desirability of an amorphous graphitizable carbon shell. Liu teaches away from an amorphous graphitizable carbon shell by teaching that, "the particles of the material include a graphite core that has been provided with a surface layer including a non-graphitizable carbonaceous material." (Liu, Abstract, and Liu, col. 5, lines 9-11.)

In addition, Applicants respectfully submit that Liu does not teach or suggest the desirability of the carbonaceous active material being prepared by the process as recited in Applicants' amended Claim 1, that was discussed above.

In the rejection of Claims 1-6 based on Liu, the Examiner stated that, "Differential thermal analysis is not discussed in the Kuribayashi et al. reference, however, the properties indicated by differential thermal analysis would be inherent." Applicants respectfully submit that Kuribayashi does not teach or suggest the desirability of two exothermic peaks as recited in Applicants' Claim 1, as discussed above. In addition, Applicants respectfully submit that Liu does not teach or suggest the desirability of two exothermic peaks as recited in Applicants' Claim 1. Applicants respectfully submit that the Examiner is making the rejection based on facts within the Examiner's personal knowledge, and Applicants respectfully request that the Examiner file an Affidavit supporting the Examiner's assertions pursuant to 37 C.F.R. § 1.104(d)(2).

Applicants respectfully submit that Claims 2-6 are dependent upon allowable Claim 1 and are allowable for at least the same reasons.

Applicants respectfully request that the Examiner withdraw the rejection to Claims 1-6 under 35 U.S.C. § 102(e) as being anticipated by Liu.

### **CONCLUSION**

In view of the foregoing, it is believed that all claims now pending (1) are in proper form, (2) are neither obvious nor anticipated by the relied upon art of record, and (3) are in condition for allowance. A Notice of Allowance is earnestly solicited at the earliest possible date. If the Office believes that a telephone conference would be

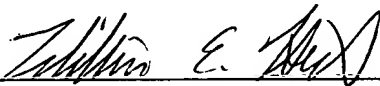
useful in moving the application forward to allowance, the Office is encouraged to contact the undersigned at (310) 207-3800.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2666 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17, particularly, extension of time fees.

Respectfully submitted,

BLAKELY SOKOLOFF TAYLOR & ZAFMAN LLP

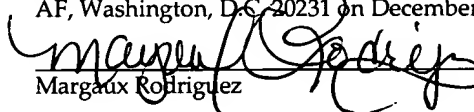
Date: December 30, 2002

  
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**CERTIFICATE OF MAILING**

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Assistant Commissioner for Patents, Box AF, Washington, D.C. 20231 on December 30, 2002.

  
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Margaux Rodriguez December 30, 2002

Attachment: VERSION WITH MARKINGS TO SHOW CHANGES MADE

VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE CLAIMS

The claims are amended as follows.

1. (Six Times Amended) A carbonaceous active material comprising:  
at least one crystalline graphite core; and

an amorphous graphitizable carbon shell coating the outside of the crystalline graphite core wherein a differential thermal analysis conducted on the carbonaceous active material in 10°C increments per minute starting from room temperature and proceeding to 1000°C at atmospheric pressure results in the displaying of at least two exothermic peaks overlapping to form shoulders, and

~~the amorphous graphitizable carbon shell coating is derived from an amorphous carbon precursor selected from the group consisting of coal pitch, petroleum pitch, coal-based oil, and heavy oil~~wherein the carbonaceous active material is prepared by a process comprising:

dissolving amorphous carbon in an organic solvent to produce a solution;

mixing crystalline graphite particles with the solution;

refluxing the mixture;

filtering the mixture to obtain a powder; and

heat treating the powder at approximately 1000°C to obtain the active material.